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Breaking Ground

The OPSC/DSA Connection to California School Districts

State of California • Department of General Services

A Publication of the Division of the State Architect and the Office of Public School Construction

Summer 2002

A Letter From
Stephan Castellanos and Luisa M. Park

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Our Summer 2002 edition of *Breaking Ground* features articles geared toward the facility issues that face urban school districts. Our goal is to provide ideas and resources for urban design solutions that may assist these districts in meeting their facility needs. In that vein, *Breaking Ground* is pleased to present a guest article by Mr. Jim Bush, Assistant Director of the School Facility Planning Division of the California Department of Education, entitled "Addressing the Complexities of Urban School Site Selection" and offering assistance through his office.

Our feature article "New Schools for a New Century" highlights the Historic Building Program within the Division of the State Architect (DSA).

In the article, "Additional Funding for Multistory Funding" school districts and Architects are reminded that there is not only additional funding available for multistory construction, but that in some cases, there may be assistance to replace existing buildings with multistory facilities.

On page 10, "Appeal Procedures of the Division of the State Architect Advisory Board" provides details of the DSA's new appeal process that allows any district to resolve issues between the DSA and the district regarding building standards.

Several members of OPSC Program Services have extensive experience with urban districts, so it is fitting that they are introduced in this issue's "Get to Know. . .."article. Their 'beat' covers Los Angeles, Orange, San Diego Counties, a mix heavy on urban challenges. As you'll see, they are enthusiastic about helping find solutions.

Last but not least our "Feature Project" highlights two urban school designs from the San Francisco Unified School District. Until you see these schools, you may not fully appreciate what building in an urban environment means. The feature illustrates one district's innovative answers to seemingly impossible questions.

As always, we hope that you enjoy this edition of *Breaking Ground*. Should you have any thoughts, ideas, or comments that assist us in providing you with most informative information we welcome you to contact the Editorial Group at **breaking.ground@dgs.ca.gov**.

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New Schools for a New Century. . . May be the Old Ones

Preserving historic school buildings as schools can generate significant benefits for you and your community. The State Historical Building Code (SHBC) offers important options for resolving code issues that would otherwise prevent preservation of historic buildings. The Division of the State Architect (DSA) can help you by offering step-by-step assistance with keeping and enhancing the cultural, environmental, and architectural values that are inherent in historic neighborhood schools.

New Pressures

Relentless population growth statewide and growth in urban and developed areas are placing new pressures on school districts to expand school facility capacity in difficult building environments. Local land use decisions also are coming under increased scrutiny as California grapples with sprawl and tries to control the rising costs of energy and infrastructure that go with new development. In these circumstances, school buildings that once were centers of neighborhood activity but have been abandoned in recent decades may regain their place in community life as the logical sites for "new" schools.

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OPSC Reminders. . .

- **2002 State Allocation Board Meetings***
  August 28
  September 25
  October 23

- **2002 Implementation Committee Meetings***
  Thursday/Friday, September 5 & 6 (Ontario)
  Friday, October 4 (Sacramento)
  Friday, November 1 (Ontario
  Friday, December 4 (Sacramento))

- **Interest Earned Report (Form SAB 180)**
  Due quarterly (March 31, June 30, September 30 and December 31) from each county for all districts which have earned interest from the Leroy F. Greene Lease-Purchase Fund.

- **Project Tracking Number**
  Project Tracking Number (PTN) required on specified forms effective as of October 1, 2001.

* Meeting dates subject to change. Check the OPSC Web site at www.opsc.dgs.ca for latest dates and times.

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Breaking *Ground*

The OPSC/DSA Connection to California School Districts

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Guest Article from the California Department of Education

Addressing the Complexities of Urban School Site Selection

Urban areas compound exponentially the difficulties of school site selection and facility design. Not only are urban schools the most desperately overcrowded in the state—many have over 200 students per acre, many use a 163 instruction-day-per-year Concept 6 calendar, some even combine double sessions with multitrack year-round education—urban areas often are so densely developed that land parcels are not available for school sites, or when they are, through condemnation or luck, they are constrained by both environmental and size limitations.

The School Facilities Planning Division (SFPD), part of the California Department of Education, recognizes the extraordinary need of urban school districts and the site constraints under which they work. And while school site safety and adequacy are still of paramount importance, the SFPD has developed flexibility in ways urban districts can comply with many of the site selection and utilization regulations, specified in Title 5, and standards, such as those in the Guide to School Site Analysis and Development.

For example, SFPD has developed a Small School Site Policy for urban districts that have measurable constraints affecting site selection options. This policy suggests the maximum number, by grade level, of students per acre for sites that are less than 50 percent of the size recommended in the *Guide to School Site Analysis and Development*. The policy also offers space-saving construction and space utilization ideas, and specifies the content of the educational specifications required to demonstrate that the district's planned educational program can be met using the site. Actual acreage credits are given to projects using multi-story construction, underground parking, and joint-use agreements. The Small School Site Policy can be found on the SFPD's Web site at **http://www.cde.ca.gov/facilities/field/smschste.htm**.

Granting contingent site approvals is another example of the SFPD's recognizing that urban school districts need flexibility in the site-selection process. An integral step in the site approval process use to be the district's completion of the Department of Toxic Substances Control (DTSC) clean-up plan. For financial or environmental hardship districts, though, this could delay, if not jeopardize, advance site apportionment. However, for district sites that require a "response action plan," SFPD now can administratively grant a contingent site approval, beginning the flow of site apportionment money, while the district completes its clean-up plan. As a condition of contract approval granting "environmental hardship" status, the district needs a letter from the DTSC stating that the cleanup will take more than six months.

Plan approval, too, used to be dependent upon a district's having first received a final site approval, itself only granted after receipt of a DTSC "no further action" letter. But with many urban school sites, site preparation begins with structure demolition, and often the presence of lead-based paint in these structures would delay DTSC approval until demolition and cleanup, which, in turn, would delay plan approval and fund releases. To avoid these delays, the SFPD now gives final plan approval when DTSC clean-up requirements are limited to the presence of lead-based paint in to-be-demolished structures.

Finally, Section 14010(c) of Title 5 of the California Code of Regulations stipulates a setback of 100 feet from the easement of 50-133 kilovolt (kV) power lines. However, in some circumstances this regulation has precluded a school district from using a best-available site and or making the best use of an already-undersized site. Urban school districts have especially expressed concern about the site limitations imposed by the 100-foot setback requirement from 66kV power lines. In response, the SFPD consulted with the Department of Health Services, power companies, and school districts to explore safe strategies for site use when 100-foot setbacks are not feasible. The result was a SFPD policy that allows urban school districts, when all reasonable options have been pursed and discounted, to develop an Electro-Magnetic Field (EMF) Exposure Management Plan.

Jim Bush, Assistant Director
School Facilities Planning Division
California Department of Education

New Schools for a New Century. . . continued from front page

Benefits: Practicality and Enrichment

Preservation is practical. The preservation of existing construction resources and introduction of modern technology in the reuse of original designs for ventilation and other systems can very likely result in energy savings. Reusing existing buildings also saves site evaluation and selection time and costs, including environmental impact assessment. In short, preservation is not only cost effective but may even enable restored schools to achieve "green building" goals and status through reuse of existing in-situ materials and beneficial features.

Preservation of historic buildings enriches a community's store of cultural resources in multiple ways. In addition to making beautiful architecture available for the enjoyment of future generations, keeping historic schools open maintains a higher quality of life for the affected neighborhoods by preserving centers of vitality within walking distance of the people who use them. Existing methods for measuring benefits are not sophisticated enough to calculate the true value of factors such as these that contribute to community depth and cohesiveness.

Options under SHBC

By 1980, many historic schools throughout California were retrofitted, sold or given away, abandoned and left unused, or demolished. In 1985, the State Historical Building Code became a mandatory part of the regulatory system. To respond to the changing school building "market," DSA has been working to refine the application of the SHBC for historic school preservation.

The stated purpose of the SHBC is to provide a cost-effective approach to preservation while also meeting mandated safety standards. A perceived expectation of rehabilitation is that it will require more work than new construction and incur higher costs. Often, meeting Title 24 mandates has required removal of materials considered non-conforming, or carrying historic structure deemed "dead weight" on new structures. Under the SBHC, buildings qualified as historic may use as force-resisting those elements constructed of archaic materials or using archaic methods of construction—provided such materials and/or methods can be tested and proven to resist those forces at approved levels of safety.

STATE HISTORICAL BUILDINGS

Statute: Health and Safety Code, Sections 18950-18961

Regulations: Title 24, Part 8, and the California Building Code, Chapter 34, Division II

When the only added cost is that of testing existing strength and added structure, applying provisions of the SHBC results in minimizing demolition and redundancy and, in the process, significantly reduces the costs of rehabilitation. These techniques have stood the test of time and have been used in the private and essential building realms since the advent of the SHBC in 1975.

In addition to structural standards SHBC also applies to exiting, building systems, and accessibility. One California school district, having designated 23 schools as historic, was able to apply SHBC provisions to address a broad range of problems in those existing structures.

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One District's Answer to the Historic Preservation Question. . .

The Sacramento City Unified School District, in concert with its community, has answered the historic preservation question on behalf of the second oldest high school in Sacramento.

C.K. McClatchy Senior High School's architectural and historic significance have been preserved by its placement in December 2001 on the California and National Register of Historical Resources. C.K. McClatchy Senior High School, completed in 1937, came about through Franklin D. Roosevelt's massive building program known as the Public Works Administration (PWA). Built in the heyday of the PWA, nearly half of the funding was provided by the U.S. government as a PWA project to help lift the country out of the Great Depression. The balance of the school funding was provided by the community of Sacramento voters who passed a local bond issue.

C.K. McClatchy Senior High School (Sacramento, CA) – Constructed in the heyday of the Franklin D. Roosevelt's Public Works Administration and completed in 1937; an excellent and skillfully executed example of Classicized Moderne architecture. View of the facade of the school, showing central pavilion.

C.K. McClatchy Senior High School, designed by the prominent Sacramento architectural firm of Starks and Flanders in 1933, is nestled amongst the trees on Freeport Boulevard near the heart of the city amidst several old residential neighborhoods of the 1920's–1930's vintage. The architects, Leonard Starks and Edward Flanders, also designed Sacramento's famous Fox Senator and Alhambra Theaters (both since demolished) and the stately U.S. Post Office Building on I Street, Sacramento (recently renovated). Featured in a February 1938 issue of *The Architect and Engineer*, CKM High was described as having design, function and landscaping made into beautiful and significant influences for developing character and nurturing mental and physical growth.

Continued on page 5

New Schools for a New Century. . . continued from page 3

For example, the district installed fire sprinklers to mitigate non-compliant doors and transoms and adopted other alternatives allowed in the SHBC to resolve additional fire and life safety and accessibility issues identified by the preservation consultants and designers.

Safety: DSA's Highest Priority

"The mandate is clear," says Stephan Castellanos, State Architect. "Schools approved under alternatives provided for in the State Historical Building Code have to be absolutely as safe as any new school that meets all the current building standards."

To meet this imperative, Castellanos has recently reorganized the school project review process within DSA to include a new Historic School Program and Structural Policy Committee that will focus exclusively on plan reviews for historic schools. The State Architect is determined to prevent conflicts between the application of SHBC and the Title 24 requirements.

Technologies for ascertaining the qualities of existing construction are available, but the cost effectiveness of validating each element of a system needs to be addressed on a case-by-case basis. The DSA staff is currently acquiring knowledge of historic building rehabilitation to be commensurate with their knowledge of modern construction. Specifically, they are assembling research on the testing of archaic materials and methods over the past 35 years and will make this information available to the Structural Policy Committee as it formulates recommended review procedures.

The result of this approach will be that historic school preservationists and designers will have clear policy direction regarding how alternatives available under SHBC can be applied. Furthermore, the DSA staff will also have clear direction on how to review SHBC applications.

In the interim, project managers requesting the application of the provisions of the SHBC must do so on a case-by-case basis. Working with the Historic School Program and DSA's Regional Managers to evaluate specific code issues will lead to resolution that satisfies the requirements.

Keys to Success

Every school project is difficult and complex, from conception and design to approval and construction. Reusing historic school buildings is no exception. Managing the complexity of preservation of existing structures demands experience and expertise. It takes foresight, specialized knowledge, and determination to bring a historic school preservation project to fruition. To make the process as smooth as possible, the Division of the State Architect recommends following these guidelines:

- Determine whether the targeted building qualifies as "historic." The SHBC authorizes local jurisdictions, including school boards, to make these designations pursuant to the National Register of Historic Places Guidelines (see below for contact information).

- Obtain design advice from experienced preservation specialists, especially those who have historic buildings and schools expertise: you can never underestimate the value of engaging experienced preservation professionals in any historic rehabilitation project.

- Add the word "preservation" to your project description—and include preservationists in your pantheon of interest groups!

- Contact DSA and stay in-touch during the process.

Working with DSA

Early consultation with DSA will facilitate the timely development and completion of your project. When your options include the reuse of a historic school building, contact your DSA Regional Manager or DSA's Historic School Program Manager, as follows:

Thomas Winter, Architect
Executive Director
State Historical Building Safety Board
916.445.7627
tom.winter@dgs.ca.gov

For historic preservation and designation of properties contact:

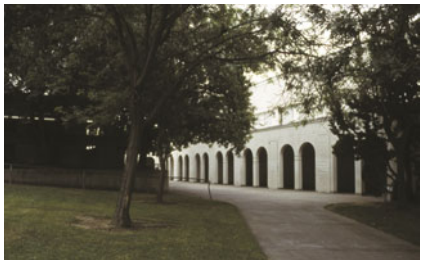
The State Office of Historic Preservation
National Register Unit
916.653.6624
http://ohp.parks.ca.gov/

One District's Answer. . . continued from page 3

More recently CKM High is described as an excellent and skillfully executed example of Classicized Moderne architecture. It carries stylized elements of Classical Revival design. Its classic details on the facade include relief panels with stylized floral design in the frieze under the windows and in the keystones above the doors; and coffers in the ceiling of the recessed entry. Complete with 1933 original design day-lighting, the second floor corridor is lighted with skylights. Its classic beauty includes stately columns, arched openings, a terra cotta roof, inner courtyards, tile drinking fountains and an elaborate tiled fountain. Retrofitted in 1977 to address safety and other modernization concerns, no design elements, materials, or character defining features on the façade of the building have been changed; clearly a jewel of the City and the Sacramento City Unified School District.

C.K. McClatchy Senior High School (Sacramento, CA) – Fund raising efforts continue in order to restore the elaborate tiled fountain, nestled in one of the school's three courtyards, that depicts California history with pioneer scenes in vividly colored tile around its basin. Still a beautiful sight today, imagine its magnificence when presented as a gift from of the daughters of the late C.K. McClatchy.

C.K. McClatchy SHS – In front of the school are concrete benches and an Indiana limestone flagpole base, donated by Mrs.. C.K. McClatchy, ornamented in a reed design matching that in the main building.



C.K. McClatchy SHS – Arcaded walkway alongside its original gymnasium.

Energy Saving Tips

Increase ceiling insulation. If your ceiling is uninsulated or scantily insulated, consider increasing your insulation to up to R-38 to reduce heating costs by 5–25 percent.

Plug "leaking energy" in electronics. Many new TVs, VCRs, chargers, computer peripherals and other electronics use electricity even when they are switched "off." If possible, unplug electronic devices and chargers that have a block-shaped transformer on the plug when they are not in use. For computer scanners, printers and other devices that are plugged into a power strip, simply switch off the power strip after shutting down your computer.

Replace your high-use incandescent light bulbs with compact fluorescent lights. A compact fluorescent light uses 75 percent less electricity to produce the same amount of light as an incandescent bulb. The compact fluorescent will last about 10,000 hours as opposed to the 600 to 1,000 hour average life of an incandescent. By replacing a 100-watt incandescent with an equivalent 25-watt compact fluorescent, you can save more than $90 per bulb in electricity costs over the 10,000-hour lifetime of the compact fluorescent.

Replace old fluorescent lights with newer, more efficient models with electronic ballasts (such as retrofit T12 lights with magnetic ballasts to T8 lights and electronic ballasts).

Flex your Power

For more energy saving tips, incentives, and information on how you can conserve energy and save money, go to the Flex your Power Web site at:

www.ca.gov/state/fyp/fyp_homepage.jsp

Get to Know. . .

Some of OPSC's Program Services Staff

The Region 6 Team:

Front Row, Left to Right:	Katrina Valentine, Lina Lessa, Karen Mandell
Middle Row, Left to Right:	Janna Shaffer, Juan Mireles, Bill Johnstone
Back Row, Left to Right:	T.J. Rapozzo, Koren Lamar, Beatriz Sandoval
Not Pictured Above:	Masha Lutsuk

Lina Lessa Supervisor in the Office of Public School Construction's (OPSC) Program Services Section, oversees Project Managers for Los Angeles, and Riverside counties, Lina Lessa thrives on the many challenges that come along with the job. Holding a degree in Communication Studies, Lina has plenty of experience working with people. "My job is very rewarding, especially when I see the positive outcomes of each individual project", says Lina. She particularly likes the one-on-one customer service that she and her team offer to the school districts. Lina has a soft heart when it comes to those districts that have impacted sites. "The need for land is usually a necessity; however, it is a must to provide information and educate our districts about valuable resources available to them."

On her off time, Lina catches as many Sacramento Kings basketball games as she can. As a season ticket holder, Lina enjoys the excitement and atmosphere of the basketball games. In addition to basketball, Lina's three dogs and two cats that keep her pretty busy.

Katrina Valentine A Project Manager with OPSC for nearly four years, Katrina Valentine is back in the swing of things. Recently back from maternity leave, Katrina is adjusting quickly to being a new mom all over again and balancing work along with it. As the Project Manager of San Diego County, Katrina loves to travel to her districts and give them a variety of assistance and knowledge. "It's tough," says Katrina. "Staying informed of newly adopted regulations and challenges of the districts can be difficult, but that's my job and it's important to assist the districts."

When not at work, Katrina spends the majority of her time with her family. She is currently a church volunteer to help raise money to preserve the historic past for the future.

T.J. Rapozo "Project Management is the perfect job for me; I love to solve problems, in the process of helping school districts overcome individual obstacles," says T.J. Rapozo. Grateful to work in a friendly environment at OPSC T.J. feels fortunate to have co-workers who share the same interest.

His past experience in sales and finance has been very beneficial in his current position of three years as a Project Manager with OPSC. Recently assigned to Riverside County, T.J. looks forward to the many challenges that come along with his job, which is not to be confused with the many challenges that come along with being a new father.

T.J. stresses that districts with impacted sites always have alternative avenues. "The school district is just part of the equation," says T.J. "School districts must work with their office of education, surrounding community, and public entities...all parties working together to find a solution."

When free from work, not only does T.J. take pleasure in spending time with his family, but he also enjoys boating in the summer and skiing in the winter.

Juan Mireles Juan Mireles began his career at OPSC as a student assistant, working in the Administration Services Department. Shortly after, Juan was promoted and given the responsibility as Project Manager to a portion of Los Angeles County. "Working with school districts in the Los Angeles area can be both challenging and exciting; there is such a broad range of projects," says Juan. It is a pleasure for Juan to travel down and meet with his clients to provide assistance.

Being a part of the process that creates new schools and modernizes existing schools is phenomenal. It is most gratifying to Juan to feel like he is making a difference in the future of California education.

While away from work, Juan enjoys exercising, traveling, and spending time with family and friends. Additionally, Juan is taking college courses to pursue a degree in electrical engineering.

Bill Johnstone Another to have began a career at OPSC with Administration Services, Bill Johnstone was quickly on the move. Bill is passionate about his work as a Project Manager for Sacramento County. He truly enjoys his assignment because of the variety of projects; small, large, rural, and city to which he provides quality customer service. "It is real when you see paper translate into reality," says Bill, which is why he feels so rewarded to see a completed project; whether it's a new school or renovation of an existing school.






Bill admits that he stays busy with his work, and that it is the support of his Program Services team members that he thrives on. "Everyone works so well together to lend a helping hand to meet the many challenges of the demanding workload for the school districts." Additionally, Bill doesn't mind mentoring new comers to Program Services, he says it helps him to stay sharp and further evolve as a Project Manager.

Outside of work Bill enjoys spending time with his family and traveling.

Masha Lutsuk New with OPSC, Masha Lutsuk started with the Application Review Team and soon moved over to Program Services. She is working closely with team members and is quick on the move through the learning process as a Project Manager. Masha has been paired with Bill Johnstone and T.J. Rapozo for mentoring sessions and the two say that her intelligence shines through on her many questions and reliable work.

Masha likes Program Services and says that it is where she belongs. "Everyone is so helpful and upbeat", it makes for a pleasant relationship between she and her co-workers.

Outside of the office, Masha likes spending time with family, which has increased by a new member; she and her husband just had their first child.

Janna Shaffer Janna has been with OPSC for two years and is a Project Manager for a part of Los Angeles County. Her past experience in many years of customer service has certainly been helpful and come in to play with her current position. "I love everything about my job," says Janna. From the individual one-on-one with each district, to the traveling and lending assistance; it's the perfect combination for Janna.

She takes pleasure in doing school district outreaches to help improve and serve her customers' needs. "I enjoy being apart if the education process, making a difference in the future, providing an environment for students to learn," says Janna.

To wind down from all of the work Janna enjoys going to the movies and she looks forward to playing a dice game called "bunko" once a month with friends.

Karen Mandell On the job at OPSC for nearly five years, Karen Mandell loves her role as the Project Manager for Orange County. Karen is eager to travel to her school districts to offer her assistance and to put a name with a face. "I like to go to the school sites so that I am able to see first hand what type of dilemmas my districts are faced with," says Karen. She adds, "This helps me to better serve their specific needs."

Karen enjoys her job at OPSC. She mentions how the office autonomy makes it easy for her to progress as a Project Manager. She is sincere when she calls the office her second family. "I have no problem coming to work each day, because I know that I'm coming to a jovial environment," Karen adds.

While away from work, Karen enjoys traveling; she and her husband recently took a relaxing trip to Carmel, located near the Monterey Bay. She also gets enjoyment from studying the stock market, working out, and shopping.

Beatriz Sandoval With the OPSC for four years now, Beatriz Sandoval is responsible for an area of Los Angeles County. She is proud to be an element of the procedure that generates the construction and modernization of schools for children. Beatriz loves working with the southern region of California, "It's great because I see the impediments that my school districts are up against," says Beatriz. This pushes Beatriz to be on the ball as a Project Manager, so that she may offer the best customer service to her clients.

Beatriz gives OPSC a lot of thanks for being such a progressive office. She likes the idea that OPSC's goals are customer service oriented. "There are so many positive aspects of OPSC," says Beatriz, who speaks fondly of her Program Services Team. She adds, "We are all team players, we work very well together and we know how to have fun!"

On her off time, Beatriz loves to travel, listen to all types of music and takes up salsa dancing. An ocean-get-away is another of her favorite past times.

Public School Construction Cost Reduction Guidelines for. . .

Urban Design Solutions

The *Public School Construction Cost Reduction Guidelines* were developed with input from many experienced architects, design professionals, contractors, school districts, and others.

Don't let these guidelines gather dust, especially if you are in the need of urban design solutions.

Multistory buildings are typically the primary solution in urban areas because of the high cost or lack of land. How can school districts save costs when the urban area will be the only choice for them? The following explores three main construction costs encountered in a multistory project. Next to each cost type, references to particular sections and pages in the *Public School Construction Cost Reduction Guidelines* (CRG) are provided for your convenience.

1. **Site Development Cost (CRG 3.1.11, page 28)**
   It may seem that the site development cost in the urban areas would be less in comparison with to the rural areas because these sites have been developed, streets and sidewalks have been built, and utilities have been installed. However, the site development may be very expensive when existing structures and unknown soil conditions exist on the site. The existing structures may contain asbestos and lead. An environment service consultant can be hired to investigate existing conditions and estimate mitigation costs.

   Soil conditions also can affect the site development cost. Since multistory buildings are typically used in urban areas, the soil bearing capacity requirement will be more critical for the foundation design. Conducting a geological report is recommended prior to design.

2. **Substructure Cost (CRG 3.2.1, page 30)**
   Substructure cost can vary widely based on the different methods of foundation systems used. The continuous footing and isolated pad footing system are typically used in most school projects. However this foundation system may require massive over-excavation, backfilling, and compaction to achieve the soil bearing capacity for multistory building loads. Moreover, if the site is located at a high water table area, the over-excavation may not be practical and economical. A pier and grade beam foundation system may be a solution for multistory construction. Not only can this system eliminate the need for massive over-excavation, backfilling, and compaction, but also the system works well on a site with a high water table. In order to choose the best substructure design to fit the site, a cost analysis and value engineering study prior to design can be beneficial.

3. **Superstructure Cost (CRG 7.1.3 and 7.1.4, page 63; and 7.6, page 74)**
   Multistory buildings require additional costs for universal design, elevators, stairs, and ramps. The structural design will require larger footings and higher seismic requirements.

   One way to reduce the cost is to consider constructing two-story modular classroom buildings. The benefit of using the standardized modular buildings is to reduce planning and construction time. Saving time is directly related to saving money.

As the population of California continues to soar, school districts will be facing ever-increasing challenges to find economic ways to build new facilities in urban areas. New strategies will be needed to focus on site development, substructure, and superstructure costs in order to provide reasonable and economical facilities for our children and within the school districts' budgets. We encourage districts and design professionals to access the guidelines by selecting "Resource Information" on the Office of Public School Construction's Web site at **http://www.opsc.dgs.ca.gov**, or on your copy of *The Office of Public School Construction Greatest Bytes*, Volume I or II, that was previously mailed to each school district.

Breaking Ground would like to hear from you!

Please let us hear from you on suggested article topics or with a possible Feature Project to showcase. Your valuable input from your perspectives and areas of expertise will assist us in producing an informative and useful *Breaking Ground*.

Is there a column you would like to see each issue or perhaps a topic that would be helpful as a feature? Do you have an innovative school design approved by the DSA and the California Department of Education within the last four years that you would like to share with other school districts?

We encourage our customers to please contact *Breaking Ground* with your ideas and comments at breaking.ground@dgs.ca.gov.

State Allocation Board's School Facility Program Joint Use Projects

Could Joint Use Be Your Urban Design Solution?

As many districts know all too well, limited space availability for building new school facilities can be a major challenge, especially for districts located in compacted urban areas. If your district is facing this problem, perhaps joining forces and building joint use facilities with the locals may be your answer. Assembly Bill (AB) 16 provides viable options for your district for three types of Joint Use projects through the School Facility Program. The Office of Public School Construction (OPSC) and State Allocation Board (SAB) are developing regulations to implement these programs. Just some of the benefits of building a Joint Use facility for the school districts in urban areas include:

- A facility that can host a great variety of community activities on weekends and weekday evenings.
- Adequate library facilities with state of the art computer and media centers that can serve both the school site and the surrounding community.
- Gymnasium facilities that can serve community recreational sports leagues as well as district sporting events.
- Fifty percent funding of the construction of the eligible area certified by the California Department of Education (CDE) may be paid for by the State of California.
- Fifty percent of the Site Development Costs applicable to the project may be paid for by the State of California.
- The Joint Use facility can be multi-story.

Keep an eye on the AB 16 regulation changes presented to the SAB to learn more about this forth-coming benefit under the School Facility Program. Questions may directed to your OPSC Project Manager.

School Facility Program

Additional Funding for Multistory Facilities

In an urban setting, site identification, acquisition, and toxic remediation may be the biggest challenge a district faces when constructing a new school. Urban districts often consider additions to existing campuses to avoid the problems (and expense) of site acquisition, but when school sites are already lacking in open area and playground space, another building clogging the landscape isn't an attractive option. Thanks to recent legislation, there is a third possibility available to hard-pressed urban school planners when the existing school is operating on a multi-track year-round education schedule (MTYRE).

Now it is possible to receive assistance through the School Facility Program to demolish existing classroom buildings and replace them with a new multistory facility which not only contains new classroom capacity, but also replaces the existing classrooms that were scrapped with brand new classrooms. The end result is increased housing without loss of precious playground and open space. In the right circumstances, this approach can actually result in increased open space! Here's how this innovative program can work for your urban district.

First, the district must qualify by meeting all of the following criteria:

- The school campus on which the new facility will be placed must operate on an MTYRE schedule and it must be less than 75 percent of the site size recommended by the California Department of Education.
- The district must have new construction eligibility in the School Facility Program for the new classrooms and subsidiary facilities to be built.
- The existing building or buildings to be demolished and replaced must be single story.
- The district must be able to show that the cost of the demolition and replacement of the existing buildings plus the cost of the new facilities must be less than the cost of providing a new school facility, including land, on a new site. To put it another way, it must be cheaper to tear down and replace the existing classrooms than to buy a new site for the needed facility.
- The new classrooms will increase the capacity of the existing school by 20 percent or by 200 students, whichever is greater. In other words, this program can't be used to construct a new multipurpose or library alone, although those facilities can certainly be a part of the overall project.
- The California Department of Education agrees that this solution is the best available and does not create an inappropriate number of students on the site.

If the district meets the qualifications, the State Allocation Board will provide a new construction supplemental grant to fund 50 percent of the replacement cost of the single story facility. The demolition of the existing one story building or buildings is also an eligible cost and will be included at the same 50 percent level.

For specifics on how to request this additional grant, please review the Office of Public School Construction (OPSC) regulations, which can be found on the OPSC Web site at **http://www.opsc.dgs.ca.gov**. Questions about this program can be directed to Mr. T. J. Rapozo at 916.324.2557 or Ms. Lina Lessa at 916.322.0260.

Appeal Procedures of the Division of the State Architect Advisory Board

From time to time, differences of opinion will surface between the Division of the State Architect (DSA) and its clients relating to matters concerning building standards as they apply to the planning, construction or alteration of building projects. Before the differences escalate into a more formal appeal process before the DSA Advisory Board (Board), clients may ask DSA for reconsideration through an internal second-tiered review process. DSA is dedicated to keeping open lines of communication between staff and clients and discussion of differences is encouraged.

To initiate a second-tiered review process in one of *DSA's Regional Offices*, simply ask that the decision rendered by a DSA Regional office staff member be reviewed by the Regional office's supervisory chain of command up to the Regional Manager, if necessary. If still not satisfied with the decision or action, then the client may refer the matter to DSA Headquarters, Chief of Regional Operations.

To initiate a second-tiered review process in *DSA Headquarters*, ask that the decision rendered by a DSA Headquarters staff member be reviewed by Headquarters supervisory chain of command up to the Deputy to the State Architect, if necessary.

It is anticipated that approximately 95 percent of the differences of opinion can be resolved within the DSA. However, in the event of continuing disagreement with a decision of DSA after exhausting the internal review process, a written appeal may be submitted to the DSA Advisory Board, formerly called the Field Act Advisory Board. Matters brought into the appeal process are generally in "gray" areas, where codes and regulations may not be particularly clear.

The Board's purpose is to advise the State Architect on the administration of the Field Act (Education Code, Sections 17280 et seq. and Sections 81130 et seq.). The Board also serves as a board of appeals in all matters relating to the administration and enforcement of building standards for the design, construction, alteration, seismic safety, fire and panic safety and alternate means of protection determinations of public buildings under the jurisdiction of the State Architect. Further, the Board acts as a board of appeals in matters relating to building projects involving the accessibility requirements of Title 24, California Code of Regulations.

To initiate the Board's appeal process, a request for an informal conference can be made to the Executive Director of the Board. The Executive Director would then convene the conference with representatives of the appellant and the State Architect or his/her designee(s) present. A decision would be made by the State Architect following the conference that would confirm, modify or reverse the original decision in question.

If the appellant disagrees with the decision, a formal hearing may be requested of the Board. An appeals committee of the Board would hold a public hearing on the appeal after the receipt of documents supporting the written request for an appeal hearing. Such committees are appointed by the Board's Chair and are composed of Board members and others (if needed) who have expertise in the subject area of the appeal matter. At the hearing, the appellant has the right to counsel, to submit documentary evidence and exhibits and to have witnesses appear and testify although the hearing is not conducted in accordance with strict rules of evidence or courtroom procedures.

The appeals committee conducts the formal hearing and if all parties agree to the committee's decision in writing, the appeal action is terminated. If all parties do not agree with the decision, the committee transmits the issue to the full Board for consideration. The Board would hear the final arguments from the appellant and render a recommended decision on the appeal. The Board will notify the Director of the Department of General Services (DGS) who may affirm, reverse or amend the ruling, order, decision or act being appealed.

Should the appellant determine he or she has been adversely affected by the decision of the DGS Director, the appellant may further appeal the issue for resolution to the California Building Standards Commission.

The time periods outlined in the appeal process are the maximum times allowed. However, *every effort is made by DSA and the Board to expedite the process and to resolve the matter, if possible, at the earliest stage of the process*. Further, besides fostering an organized and expeditious method to resolve problems, the appeal process can bring to light issues that may ultimately lead to code, regulatory, or operational changes. DSA clients are encouraged to use this process without concern of compromising future working relationships with any member of the DSA organization.

If you have any further questions or want more information about DSA's appeal process, please contact:

Patricia Heerhartz, Executive Director
Division of the State Architect Advisory Board
Division of the State Architect
1130 K Street, Suite 101
Sacramento, CA 95814
916.445.1304

Division of the State Architect Appeal Process

Goal: To resolve differences of opinion with clients at the lowest level possible in an expeditious manner.

Regional Office (Internal Process)

- Decision made in plan or construction review, client does not agree. *
- Client may ask for second-tiered review process. †
- Decision would be reviewed by lead/supervisor, client still does not agree.
- Regional Office Manager would review, client does not agree.
- DSA Headquarters, Chief of Regional Operations would review, client does not agree.
- Deputy to the State Architect would review, client still does not agree.
- Client could appeal to the DSA Advisory Board.

Headquarters Office (Internal Process)

- Decision made by staff member, client does not agree.
- Client may ask for second-tiered review process.
- Decision would be reviewed by supervisor, client does not agree.
- Decision would be reviewed by Deputy to the State Architect, client does not agree.
- Client may appeal to the DSA Advisory Board.

Advisory Board (Formal Process)

- Client writes letter to Board's Exec. Director, who convenes an informal conference with the appellant and the State Architect or his/her designee(s) present, client does not agree.
- An appeals committee of the Board is appointed and composed of Board members and others (if needed) who have expertise in the subject area of the appeal matter.
- Appeals committee hears appeal and renders decision, client does not agree
- Client may request an appeal hearing before the entire Board.
- Board hears appeal and recommends a decision to the DGS Director, client does not agree.
- Client may request an appeal hearing before the California Building Standards Commission (if the matter involves a code enforcement issue).

* If client agrees at any point, process is terminated.

† Reviews may include consultation with other Regional offices and/or other enforcement agencies. All appealed decisions will be recorded in writing.

DSA Project Submittal and Plan Review Process Now Online

Preparing complete and accurate documentation when submitting a project to the Division of the State Architect (DSA) can facilitate a DSA plan review.

To better serve our clients, the Division of the State Architect's (DSA) web site has been recently updated to provide information on DSA's project submittal and plan review processes. For general information, the DSA Plan Review Process link provides an overview of DSA's project submittal and plan review processes. Types of Projects defines the various categories of construction projects subject to DSA review. Try checking DSA's Project Submittal and Plan Review FAQs page to see whether other questions you may have about the process have been addressed. DSA also provides a DSA Project Submittal Checklist, which can be downloaded and used as a tool in assembling required documentation when submitting a project for review.

You will find DSA's project submittal and plan review information at **http://www.dsa.dgs.ca.gov/plan_review/main.html** and as a link from DSA's home page (**http://www.dsa.dgs.ca.gov**). We welcome any suggestions or comments about project submittal and plan review information presented on DSA's Web site; please forward your comments to Janet Remley at DSA at **janet.remley@dgs.ca.gov**.

DSA Reminders. . .

Following are the remaining Project Inspector exam dates and deadlines for this year. The application and information package may be downloaded from the DSA Web site or call David Sault at 916.327.3459 to have it them mailed.

DSA Project Inspector Examination Schedule:

- DSA Inspector Exam Dates
  Saturday, December 7, 2002
- Earliest Postmark Date for Filing
  August 30, 2002
- Latest Postmark Date for Filing
  October 11, 2002

DSA Advisory Board Meeting:

- September 13, 2002

Universal Design Advisory Board Meeting:

- September 20, 2002

The OPSC/DSA Connection to California School Districts

Feature Project:

John O'Connell High School and George R. Moscone Elementary School/ Las Americas Childcare Center

A 1,400 student comprehensive high school on less than two acres, with a full gymnasium and outdoor play facilities?

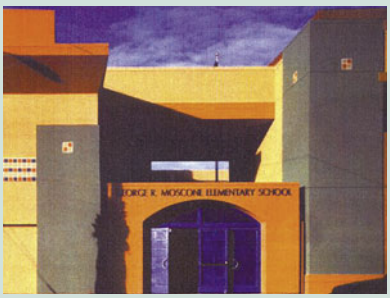
An elementary school on an acre and a half with multilevel parking, play areas, and a separate child care facility?

It's doubtful that any district in California faces more difficult facility and siting issues than the San Francisco Unified School District. Impossibly small sites, strong, involved community groups, and the need for facilities in older, established neighborhoods are just a few of the considerations that must be addressed. Yet the solutions the district has produced are as innovative and creative as the challenges are formidable. Our two featured projects illustrate the district's success in the face of almost overwhelming obstacles.

During a planned modernization of the John O'Connell High School, it was discovered that the structure, located on a one and one half acre site and originally built by Henry Ford as a Model T assembly plant, was damaged in the 1989 earthquake. One block away, the Moscone Elementary School/Las Americas Child Center was slated for demolition and reconstruction. Both schools were located in the Mission District of San Francisco, one of the most densely populated areas in San Francisco where open space and parking are limited.

Parents and community members were involved in the process from the beginning. The main issues and concerns that kept surfacing were maintaining open space in the Mission District and providing parking for both schools. Seizing a rare opportunity, the District proposed to solve these issues by swapping the two schools. Placing the O'Connell High School on the slightly larger site formerly occupied by the elementary school allowed construction of an outdoor playing field for the high school that was non-existent at the old site. Meanwhile, at the elementary school the District built an enclosed court, a playground on the second floor above a new parking garage, and a separate child care facility to provide a safe and secure environment for children of all ages. As hard as it is to believe, upon completion, the District had managed to create, on a total of less than three acres of land, two new schools, an additional 10,900 square feet of open space, and an additional 116 parking spaces in the Mission District.

In spite of the challenges presented by the extremely small sites, educational program needs were not sacrificed. As you will see in the pictures and descriptions that follow, both schools represent state of the art educational facilities without compromise.



John O'Connell High School

The building is linearly organized along an enclosed pedestrian street with an atrium space as the focus. The design intent is to create an exciting identity for the school, a central circulation area that is easy to supervise, as well as a social area for the students. John O'Connell High School is also designed to facilitate community use. Spaces such as the gymnasium, library, cafeteria/kitchen, amphitheater/plaza, and athletic field are located at the eastern side of the school along Harrison Street for community access.

Project Description:

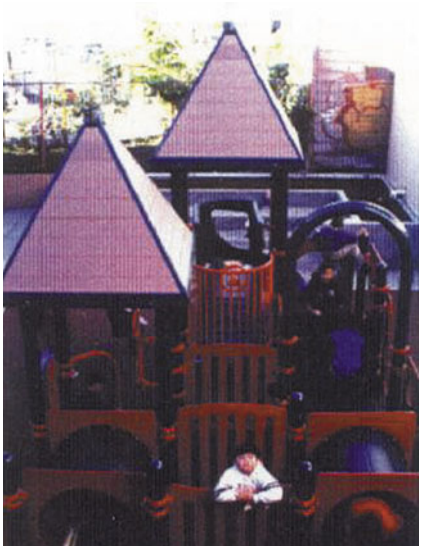
Address:	2355 Folsom Street, San Francisco
Construction Cost:	$26.5 Million
Construction Schedule:	November 1997 – August 2000
Proposed Enrollment:	1,472 (Designed Capacity)
Building Area (sf):	127,000
Site Area (sf):	65,340
No. of Classrooms:	34
Special Areas:	8 Technology Labs, 5 Science Labs, Cafeteria, Library, Gymnasium, Locker Room, Multi-Media Center (Pending Completion)
Status:	School occupied Fall 2000

Project Team:

Architect:	Marshall/Lee Inc.
Design Consultant:	Diseno/Santos & Associates
Structural Engineer:	Forell/Elsesser Engineers, Inc.
Electrical Engineer:	Pete Lapid & Associates
Mechanical Engineer:	MCT Engineers
Landscape Architect:	Keller Mitchell & Company
Civil Engineer:	Robert A. Karns Associates
Construction Manager:	Vanir Construction Management, Inc.
General Contractor:	S.J. Amoroso Construction Co. Inc.

George R. Moscone Elementary/Las Americas Childcare Center

Moscone Elementary School and Las Americas Child Development Center is located in the heart of the Mission District bounded by 21st and 22nd and Harrsion and Treat street. George Moscone ES is a 2-story structure built around a courtyard that has covered corridors on four sides and at both levels. The gymnasium is reused from the former John O'Connell High School that occupied the site; it has been renovated as a gymnasium, cafeteria, library and a computer classroom. Las America CC is designed as a separate building so that all classrooms on the first floor look into and have direct access to the play-ground. The second level has access to the playground located above the new parking garage.



Project Description:

Address:	2576 Harrison Street, San Francisco
Construction Cost:	$10.8 Million
Moscone ES Bldg Area (sf):	36,726 (Building); 3,464 (Balcony)
Las Americas CC Bldg Area (sf):	13,568 (Building); 1,208 (Balcony)
Parking Structure (sf):	43,920
Playground (sf):	21,960 (Including Roof Deck Yard, Kindergarten Yard, Childcare Yard)
Site Area (sf):	67,375
Status:	School occupied Fall 1997

Classrooms and Specialty Spaces:

George Moscone Elementary School

First Floor	Qty	Second Floor	Qty
Kindergarten Classrooms:	3	Third Grade Classrooms:	2
First Grade Classrooms:	2	Fourth Grade Classrooms:	2
Second Grade Classrooms:	2	Fifth Grade Classrooms:	2
PRT Classroom:	1	Science Classroom:	1
RSP Classroom:	1	Faculty Work Room:	1
Library:	1	Faculty Lounge:	1
Computer Classroom:	1	Parents Room:	1
Cafeteria:	1	Gym:	1
Office:	1		
Principal's Office:	1		
Conference Room:	1		
Nurses Room:	1		
Kitchen:	1		

Las Americas Childcare Center

First Floor	Qty	Second Floor	Qty
Pre-Kindergarten Classrooms:	3	School Age Classrooms:	4
Office:	1	Faculty Work Room:	1
Director's Office:	1	Faculty Lounge:	1
Conference Room:	1		
Nurses Room:	1		
Kitchen:	1		

The Facility also includes a Two-Level Parking Garage with a Roof Deck Play Yard.

Project Team:

Architect:	Del Campo & Maru Architects
Structural Engineer:	Structus Inc.
Electrical Engineer:	W. L. Associates
Mechanical Engineer:	MHC Engineers
Civil Engineer:	Telamon Engineers
Construction Manager:	Vanir Construction Management, Inc.
General Contractor:	S.J. Amoroso Construction Co. Inc.